

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1, 2, 10-11, 20-22, 24-27 and 30-49 are pending. Claims 1, 2, 10-11, 20-22, 24-27 and 30-32 are amended. Claims 34-39 are newly added.

Interview

Applicants note with appreciation the time and effort taken by the Examiner and the Examiner's supervisor during the January 16, 2008 interview with Applicant's representative, Mr. Gary D. Yacura. During the interview, the § 101 and art grounds of rejection were discussed. These discussion will be referred to with respect to each of these rejections below.

Section 101 Rejection

Claims 1-29 stand rejected under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. Applicants respectfully traverse this art grounds of rejection.

As discussed during the Examiner interview, Applicants have amended the claims to recite a "computer readable medium." For example, paragraph [0038] of the originally filed application indicates that the computer readable medium may be a high density optical disc such as a Blu-ray ROM (BD-ROM), BD-RE, etc.

Applicants further provided arguments as repeated below as to why the claims of the subject application defined statutory subject matter.

The Examiner cites MPEP 2106.IV.B.1 in the Section 101 rejection. While MPEP 2106.IV does include a Section B, there is not a Section B.1, so it unclear what portion of the MPEP the Examiner is exactly relying upon. The Examiner appears to be under the mistaken

impression that only computer programs recorded on a computer readable medium constitute statutory subject matter. This is simply incorrect. MPEP § 2106.01 states the following.

In this context, "function descriptive material" consists of **data structures** and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited music, literary works and a compilation or mere arrangement of data.
(emphasis added)

Data structures recorded on a computer readable medium may constitute statutory subject matter.

MPEP § 2106.01 goes on further to state:

Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, [In re Warmerdam,] 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory).

In view of the above, a more detailed discuss of In re Warmerdam and In re Lowry is warranted.

Discussion of In re Warmerdam

Claim 1 of In re Warmerdam recited:

1. A method for generating a data structure which represents the shape of [sic] physical object in a position and/or motion control machine as a hierarchy of bubbles, comprising the steps of:

first locating the medial axis of the object and

then creating a hierarchy of bubbles on the medial axis.

Claim 6 of In re Warmerdam recited:

6. A data structure generated by the method of any of Claims 1 through 4.

With respect to claim 1, the court found both steps drawn strictly to mathematical equations, and therefore non-statutory abstract ideas. In re Warmerdam, at 1759. The court went on to find that the data structure of claim 6 suffered from the same defect.

Discussion of In re Lowry

Claim 1 of In re Lowry recited:

1. A memory for storing data for access by an application program being executed on a data processing system, comprising:

a data structure stored in said memory, said data structure including information resident in a database used by said application program and including:

a plurality of attribute data objects stored in said memory, each of said attribute data objects containing different information from said database;

a single holder attribute data object for each of said attribute data objects, each of said holder attribute data objects being one of said plurality of attribute data objects, a being-held relationship existing between each attribute data object and its holder attribute data object, and each of said attribute data objects having a being-held relationship with only a single other attribute data object, thereby establishing a hierarchy of said plurality of attribute data objects;

a referent attribute data object for at least one of said attribute data objects, said referent attribute data object being nonhierarchically related to a holder attribute data object for the same at least one of said attribute data objects and also being one of said plurality of attribute data objects, attribute data objects for which there exist only holder attribute data objects being called element data objects, and attribute data objects for which there also exist referent attribute data objects being called relation data objects; and

an apex data object stored in said memory and having no being-held relationship with any of said attribute data objects, however, at least one of said attribute data objects having a being-held relationship with said apex data object.

In finding that the printed matter cases have no factual relevance to the claims at issue in In re Lowry, the court stated:

Nor are the data structures analogous to printed matter. Lowry's ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships within a memory. Lowry's claims dictate how application programs manage information. Thus, Lowry's claims define functional characteristics of the memory.

In re Lowry, at 1034.

The court further noted:

Indeed, Lowry does not seek to patent the Attributive data model in the abstract. Nor does he seek to patent the content of information resident in a database. Rather, Lowry's data structures impose a physical organization on the data.

In re Lowry, at 1034.

And, on the issue of abstract ideas, the Federal Circuit in In re Lowry noted:

More than mere abstraction, the data structures are specific electrical or magnetic structural elements in a memory. According to Lowry, the data structures provide tangible benefits: data stored in accordance with the claimed data structures are more easily accessed, stored, and erased. Lowry further notes that, unlike prior art data structures, Lowry's data structures simultaneously represent complex data accurately and enable powerful nested operations. In short, Lowry's data structures are physical entities that provide increased efficiency in computer operation.

In re Lowry, at 1035.

The claims at issue (e.g., claim 1) are analogous to the claims in In re Lowry, and as such are clearly statutory subject matter. Unlike the claims of In re Warmerdam, the claims of the subject application do not recite mathematical equations, or the generation of data structures using mathematical equations. Instead, as in In re Lowry, claim 1 recites a computer readable

medium storing a specific data structure that dictates how application programs reproduce data. Accordingly, because the computer readable medium recited in claim 1 includes a data structure having a navigation area, which provides navigation commands for managing reproduction of video area recorded on the computer readable medium, claim 1 is clearly directed towards patentable, statutory subject matter.

In the language of MPEP §2106.01 regarding functional descriptive material, claim 1 is directed to “a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure’s functionality to be realized, and is thus statutory.”

While the discussion above has been made with respect to claim 1, these arguments equally apply to independent claim 25 and the claims dependent upon claims 1 and 25. A such, Applicants respectfully request that the Examiner withdraw this rejection.

Art Grounds Of Rejection

Claims 1-33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yamamoto (U.S. Patent No. 5,742,569). Applicants respectfully traverse this art grounds of rejection.

During the Examiner interview, the Examiners indicated that they were reading the claimed main reproduction path on the DSI data 51 such as disclosed in column 9 and 10 of Yamamoto, and they are reading the claimed side reproduction path on the PCI data 50 disclosed in columns 9 and 10 of Yamamoto. Applicant’s representative pointed out that the PCI data, in particular the highlight information and its association with the DCI data is disclosed in more detail in column 21 of Yamamoto. In particular, Yamamoto teaches displaying a video image, such as a music video. The words to the song of the music video are also displayed, and based

on when the words should be sung, the highlight information causes the words to become highlighted on the display. Namely, it will be appreciated that the highlight information is displayed while the main image is displayed. As such, Yamamoto cannot disclose or suggest “navigation commands for managing reproduction of at least video data forming a main reproduction path and a side reproduction path such that the main reproduction path is not reproduced during reproduction of the side reproduction path,” as recited in the independent claims. Therefore, the independent claims are not anticipated or rendered obvious to one skilled in the art by Yamamoto. The dependent claims are patentable at least based on their dependency upon the allowable independent claims.

Applicants respectfully request that the Examiner withdrawn this art grounds of rejection.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of the pending claims in connection with the present application is earnestly solicited.


Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants hereby petition for a one (1) month extension of time for filing a reply to the outstanding Office Action and submit the required \$120 extension fee herewith.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Gary D. Yacura at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By  55,149
For Gary D. Yacura, Reg. No. 35,416

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

GDY/ame